

REMARKS

The Examiner's approval of the drawings is respectfully acknowledged.

The requirement for continuing the election requirement is noted, and Applicants will submit claims to the non-elected method of the invention by way of a divisional application.

Applicants have attempted to cure the Examiner's objections to claims 3, 6 and 11-13 by way of the above-referenced amendments to these claims. Claim 15 and 16 has been amended to cure the indefiniteness referred by the Examiner in the outstanding Office Action.

Turning next to the art based rejections applied by the Examiner in that Action, Applicants respectfully request reconsideration of the claims as amended for the following reasons.

As amended, independent Claim 2 calls for the bead to be extruded continuously along the entire length of the tubes so as to provide the sole connection between the synthetic tubes.

This revision to independent Claim 2 renders Rey (U.S. Pat. No. 2,877,708) of only incidental relevance because, in Rey, the tubes are held in bonded relationship by the extruded plastic which surrounds the entire outer surfaces of the tubes. The Examiner has acknowledged that Rey does not disclose an adhesive bead that serves to bond the tubes together.

The Examiner relies upon Shaw (U.S. Pat. No. 5,365,851) in view of a newly cited reference EP097414 related to applying adhesive in spaced gobs to provide a multi-conductor flat or ribbon-type cable of the type used in automotive harness assemblies to provide electrical signals to vehicular lights or the like. The Applicants object to this culling of prior art from a non-related field

to apply as if it would be known to a person of ordinary skill in the art of fabricating shock tube or percussive signal transmission tube used in the art of exploding or detonating devices.

Applicants take exception to this apparent attempt by the Examiner to utilize Applicants' disclosure as a template from which to recreate the claimed invention. The relevant evidence on the record in this application, to extruding an adhesive bead to provide the sole connection between adjacent shock tubes, is outlined quite clearly in the Declaration of Steve Bartholomew in the previous response filed with the Request for Continued Examination (RCE) in this case.

Mr. Bartholomew's recollection of the actual facts in this situation countervails the Examiner's conclusory statements in the outstanding Office Action, to the effect that the prior art Shaw reference (U.S. Pat. No. 5,365,851) "inherently" must involve some sort of attachment between the side-by-side shock tube as displayed in that Shaw '851 patent reference. Clearly, those associated with the assignee of that Shaw patent entertained no such perception of redundant shock tube, and envisioned that redundant shock tube required an outer sheath as suggested in U.S. Pat. No. 5,001,981 (also issued to Shaw), or in the alternative an extruded outer sheath as suggested in the even early prior art patent disclosures.

The Applicants respectfully traverse the Examiner's rejection of Claim 2, and more particularly notes that the "inherency" perceived by the Examiner in the Shaw '851 patent is a result of the Examiner's hindsight after having the benefit of the subject application before him.

Claims 14, 15 and 16 each merit favorable consideration in light of their dependency upon Claim 2. In addition, Claim 16 calls for differently colored transmission tubes to take advantage of the lack of any outer sheath or extrusion covering the redundant shock tube assembly. Such an advantage could only be realized in prior art assemblies, such as suggested by Shaw in the '981 patent,

only if the outer sheath were transparent. A possibility not suggested or shown in the prior art.

Claims 14 and 15 call for elements of an invention and are drawn from the field of shock tubes, and the amended claims clearly distinguish over the artificially created combination conjured up by the Examiner in an attempt to link Shaw '851 and EP097414. These prior art patents are from widely different arts and should not be combined under the guidelines set forth in the MPEP and the uses decided by the U.S. Patent and Trademark Office's Board of Patent Appeals and the courts.

Claims 3-6 are rejected as unpatentable over the above-mentioned patents, from different technological fields, further in view of Thureson (U.S. Pat. No. 4,607,573). While Applicants do not claim to have originated the material from which shock tube can be made, or the reagent used within the tube, Applicants note that the combination called for in these claims is nevertheless significant since the selection of an EVA copolymer with a vinyl acetate content ranging between 2 and 20% allows the fabricator of shock tube to achieve the degree of bonding between the outer layers of the shock tube (polyethylene or nylon) without interfering with the inner layer (SURLYN) when the percussive powder provided within the inner layer of the tube is ignited. While one of ordinary skill in the art would understand the make up of shock tube generally, such a person would not be likely to consult patents from the art of fabricating ribbon cable to devise a new method of producing redundant shock tube without requiring an outer sheath or other cumbersome carrier for that shock tube. The only thing obvious from the Shaw '851 reference patent might be that dual shock tube could be provided without any such outer sheath or extruded carrier component whatsoever. The more likely conclusion from the '851 Shaw patent references would be to provide one of the other of the techniques described in the Bartholomew declaration, but not the technique of the present invention. The declaration of Mr. Bartholomew overcomes any presumption that this Shaw '851 patent includes any inherent indication that bonding of these tubes can be inferred from Figure 1 of this Shaw '851 patent.

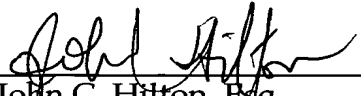
Claims 11 and 12 are directed to the specifics of the present invention whereby the separating forcing required to break apart the adhesively joined tubes can be controlled to meet requirements of the user. The prior art generally in the cited references in particular fail to show or to suggest any improvements on the lines of those called for in these claims.

Finally, the Examiner's comments with respect to the vinyl acetate content would now appear to be misdirected. The Applicants apologize for any confusion created by the language of original claims 11 and 12, and point to the novelty now present with respect to the vinyl acetate content of the adhesive used, rather than the chemical content of the tubes themselves. The outer layer of the tubes comprises polypropylene or nylon, rather than vinyl acetate. The vinyl acetate content, preferably in the range of 2-20% by weight, but preferably 12% by weight, applies solely to the adhesive. Such a limitation was part of the application as originally filed, and the Applicants respectfully point to original claim 4 in the originally filed utility application, which was based in turn on the provisional case filed March 7 and a provisional filed March 13, 2003 for the basis of this statement.

Applicants have traversed the rejections levied by the Examiner in the outstanding Office Action, and respectfully request reconsideration of the claims as amended in light of these remarks. Should the Examiner have any questions on the claim language as presented, Applicants' attorney can be contacted at the telephone listed below in order to expedite the prosecution of this RCE application.

No fees are considered to be due; however, if it is determined that payment of a fee is required, please charge our Deposit Account No. 13-0235.

Respectfully submitted,

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